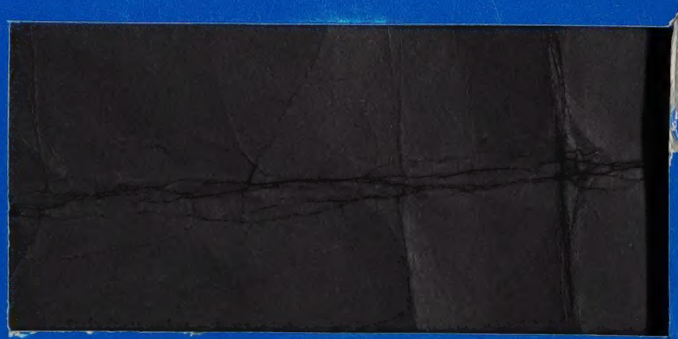
ME-7166 Vol 3 of 5
c.2



tau-tron

ME-7166

INSTRUCTION MANUAL

MF-2

MAIN FRAME

VOL 3 of 5

High-Speed Digital Instrumentation

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INTRODUCTION

The Tau-Tron Model MF-2 Main Frame provides power and cooling for your Tau-Tron Modular Instruments. It will accommodate up to four single width modules, or two double width modules. The MF-2 accepts both 115 VAC and 230 VAC and supplies unregulated DC power to each plug-in module through four connectors. To hold the instrument modules securely in place, a module lock-in feature is provided. This 19 inch wide unit is equipped with standard slotted ears for rack mounting and rubber feet for bench top use.

SPECIFICATIONS

Dimensions---19" x 17 1/10" x 8 3/4" accommodates two half-size modules, or four quarter-size modules, or one-half and two quarter-size modules.
Power---115/230 VAC ±10%, 50-60 Hz. Delivers unregulated DC power to each plug-in module.
Cooling---Twin rear mounted fans; air exhaust through the top.
Module Power---Automatically provided when a module is inserted.
Module Interconnections---A 50 ohm system is used throughout; all output and input impedances are 50 ohms. All signal connectors are BNC type, suitable for coaxial cable.

TMI STANDARD SIGNALS
Logical Zero---Between -200 mv and +600 mv.
Logical One---More positive than 1.7 volts.
Standard Amplitude---2.0 volts typical.
Transition Edges---Typically 2 ns, 3.5 ns maximum.
Impedance---50 ohms to system ground.
Waveshape Distortion---Less than ±7%, terminated.

ACCESSORIES
Plug-In Extender Cable---For use in calibration and servicing.
Blank Plug-In---Fills unused module space. Quarter-size or half-size. Required for effective module cooling.

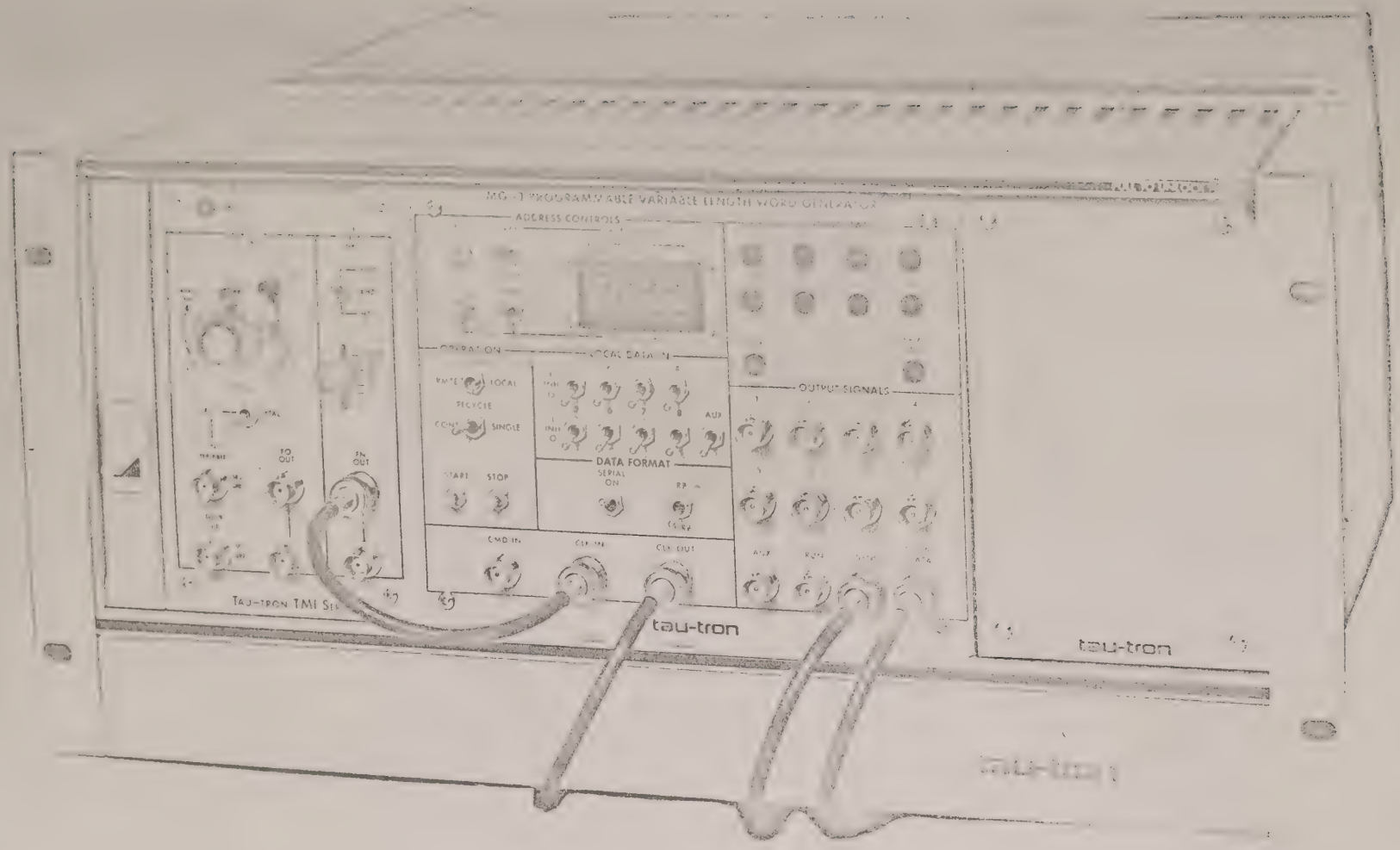

Figure 1

The Tau-Tron Model MF-2 Main Frame---here containing a Model MS-1, 1 Hz to 100 MHz VHF Pulse Source; a Model MG-3 Programmable Variable Length Word Generator; and a BP-4 blank plug-in.

OPERATING INSTRUCTIONS

Power Requirements---The MF-2 will operate on either 115 VAC or 230 VAC. A line voltage selection switch is located on the rear panel. This two-position slide switch must be set to the user's line voltage.

Fusing---The fuse socket is located on the rear panel. The fuse should always be the SLO-BLO type: 3A for 115 VAC or 1 1/2A for 230 VAC.

Cooling---The MF-2 contains twin cooling fans. Cooling air is drawn in through the rear panel, circulated through the modules, and exhausted through the top of the main frame. To ensure good air flow for proper module cooling, all four module positions should be filled with functional modules or blank plug-ins.

ON-OFF Switch---A combination power switch/pilot lamp is located on the left front panel. This main power control turns all modules on or off, simultaneously.

Module Power---The MF-2 supplies unregulated DC power to each module: ±17 VDC and ±34 VDC. Regulation and distribution of power is accomplished within each module. Power is routed through four, 24 pin connectors to each module position. The left most connector, at module position one, also provides 117 VAC for special TMI or user built modules.

Module Lock---The module lock-in bar holds all modules securely in the main frame. The locking control lever is located at the upper right corner of the front panel. When the lever is pressed in, all modules are locked in place; when the lever is pulled out, all modules are unlocked for removal.

Inserting Modules---With the module locking lever pulled out, your TMI modules will slide easily into place. Standard TMI modules will operate in any module position. However, modules with special

functions, like remote programming, are each equipped with an auxiliary connector; this connector must be aligned with its counterpart in the main frame.

Power is connected automatically as each module is pushed into place. The single power switch turns all the TMI modules on and off simultaneously. When the modules have been inserted, push the locking control lever in to lock all modules in the main frame.

Remote Programming Connectors---Modules ordered with remote programming or peripherals, such as a card reader or a remote printer, are equipped with a 50 pin connector; this connector mates with its counterpart in the main frame. The remote programming can then be controlled via the 50 pin Amphenol connector and the rear panel of the main frame. The special connector may be changed to other module positions by removing the main frame top plate.

User Built Modules----The BP-4 and BP-2 blank modules, normally used to fill empty module positions, can also be used to house user built circuits. These blank modules are equipped with the standard TMI 24 pin power connectors supplying the unregulated ±17 and ±34 DC voltages. In module position one, the connector also contains 117 VAC pins. The total current drawn must not exceed 4A from the positive supply or 8 amps from the negative supply.

Maintenance---The fan filters should be kept clean for adequate air flow. To clean, pry off filter covers using a screwdriver (four notches in the filter covers are for this purpose). Both the filter cover screen and the filter screen should be vacuumed clean. The frequency of this maintenance will depend on the operating environment.

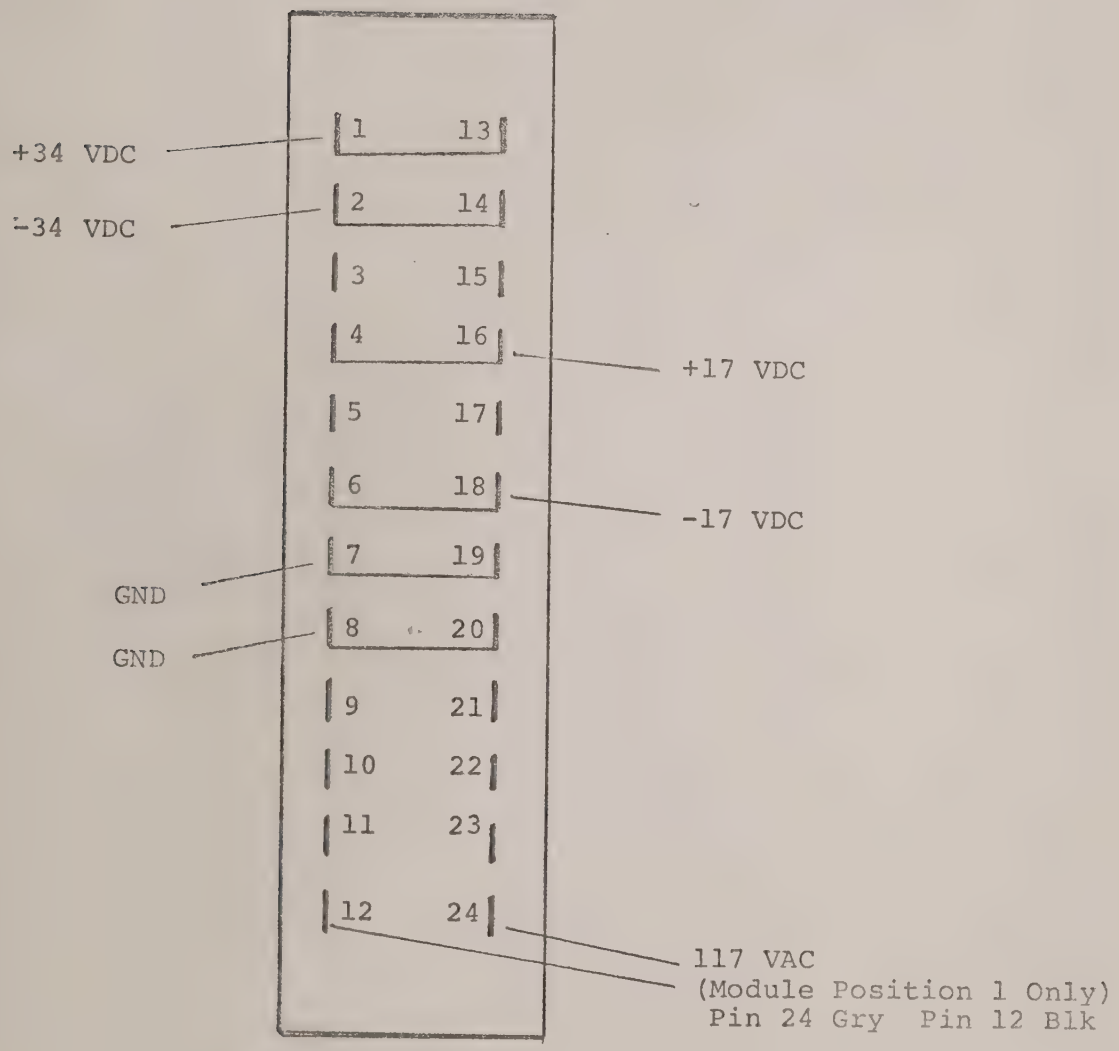

Figure 2
POWER CONNECTOR PIN DIAGRAM

LIST OF ILLUSTRATIONS

MF-2 Schematic TDJ-53171

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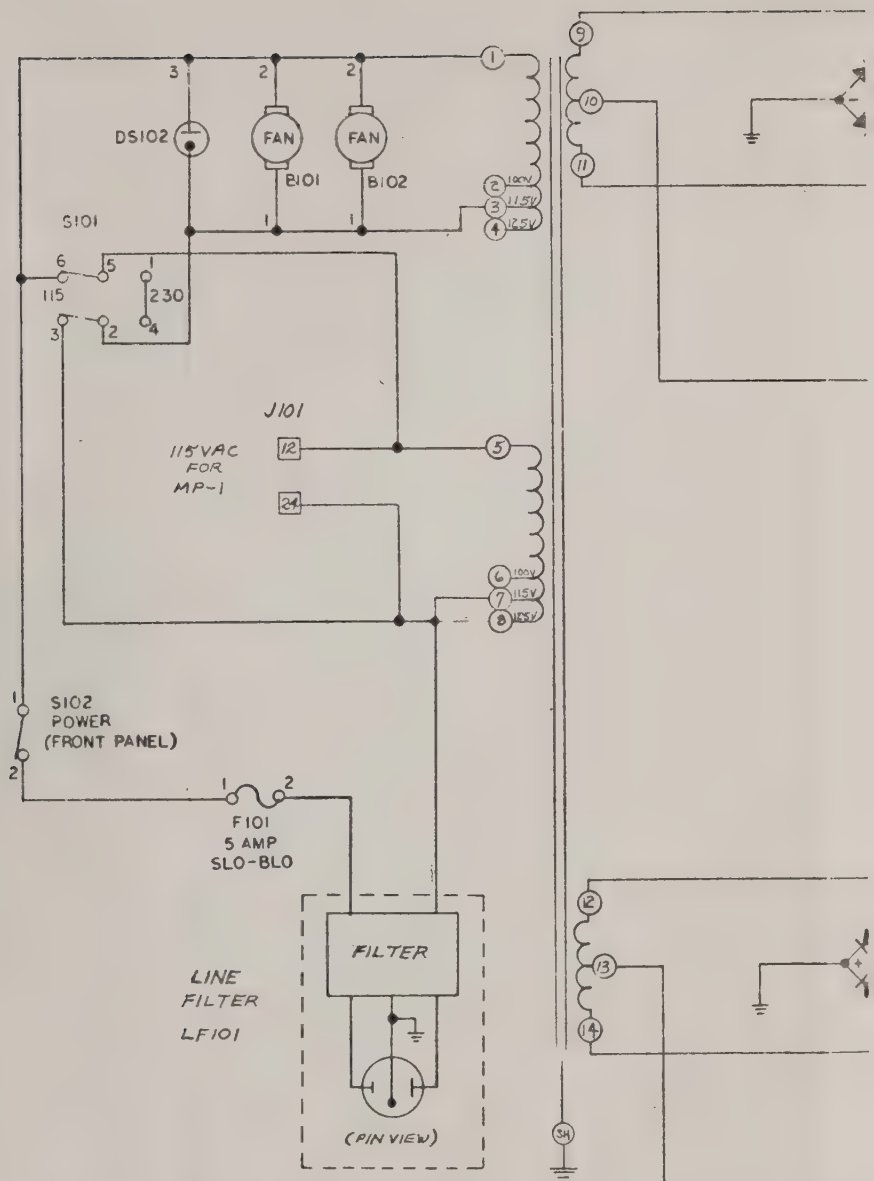
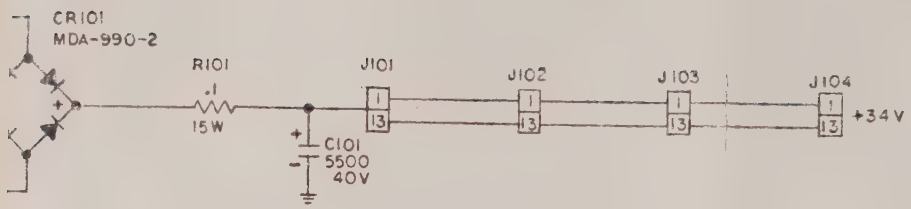
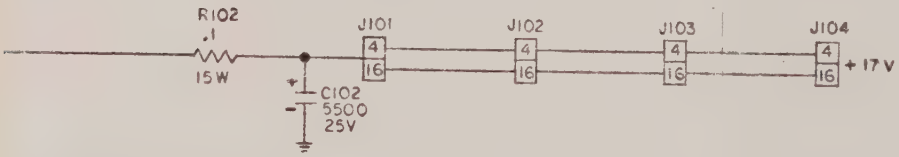


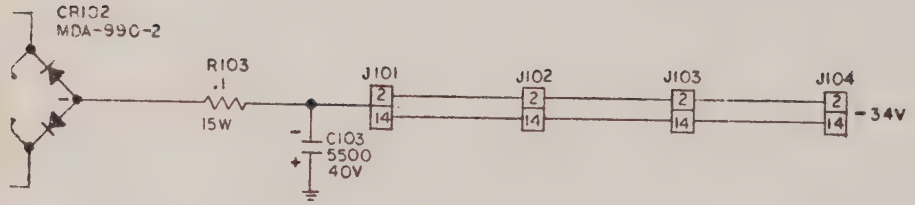
1. UNLESS OTHERWISE SPECIFIED;
   a) RESISTANCE VALUES ARE IN OHMS ±5%, ¼W
   b) CAPACITANCE VALUES ARE IN MICROFARADS.

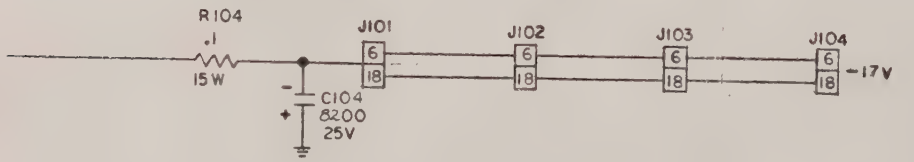
NOTES;





REV/EFFECTIVITY
REV. 0 S/N 8730018 → 107
REV. 1 S/N 8730108 → 8730537
REV. 2 S/N 8730538 →





TAU-TRON, INC.

TMI SERIES

POWER SUPPLY ASSEMBLY

tau-tron inc
27 Industrial Ave., Chelmsford, MA 01824
Tel: (617) 256-9013 TWX: 710 343 6781

INSPECTION

1. MECHANICAL

If any damage is observed on the shipping carton, ask that the carrier's agent be present during unpacking. In the event that any external damage is found on the instrument, notify the carrier and Tau-Tron as soon as possible. Follow claims procedure below.

2. ELECTRICAL

Check out the electrical performance of the instrument as soon as possible after receipt. Should any malfunctions be observed, follow the claims procedure below.

3. CLAIMS

If the unit has mechanical damage or fails electrical check-out, notify Tau-Tron immediately. For mechanical damage which occurred during shipment, notify the carrier also. The Tau-Tron Customer Service Department will arrange for repair or replacement of the instrument. A Return Authorization number will be issued for all returns.

4. REPACKAGING

Use the original shipping carton and materials, if available. Otherwise use a double-walled carton (test strength of 350 pounds), and shock absorbing material such as bubble-wrap to prevent instrument from moving in the shipping carton during transit. Secure package by sealing with heavy paper tape.

NO. ME-7166 VOL 3

TITLE: MF-2
MAIN FRAME

NAME/PHONE/ORGANIZATION	DATE
[redacted]	
[redacted]	
[redacted]	

27 Industrial Avenue, Chelmsford, MA 01824 (617) 256-9013